

Ian Gallagher

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Education

2017–2021 **B.S. Mathematics; Minor: Computer Science**, *Cal Poly*, San Luis Obispo, 3.93 GPA.
Attended graduate courses in Field Theory, Point Set Topology, Algebra, and Real Analysis.

Experience

- 2019–Present **Software Team Member**, *Cal Poly CubeSat Laboratory*.
Software Lead for NASA ER-2 payload designed to record plane's in-flight vibrational profile and interface with custom XCube CPCL payload carrier.
Refactored and updated existing microcontroller analog to digital converter sampling pipeline. Designed for embedded Linux platforms. Languages Used: C, Python.
- Summer 2020 **Frost Research Scholar**, *Cal Poly Mathematics Department*.
Member of pure mathematics student research team lead by Dr. Eric Brussel.
Generalized results about the structure of the quaternions to a class of objects known as the generalized quaternions.
Classified the embedded commutative sub-algebras, their conjugacy classes, and created associated moduli spaces.
- Summer 2019 **Frost Research Scholar**, *Cal Poly Mathematics Department*.
Implemented theoretical climate models from research papers in Matlab.
Utilized shell scripts to parallelize runs of model over a wide array of input parameters.
Created visuals and statistical tests to investigate link between internal model behavior and external forcing signals.

Technical Skills

Languages C, Python, Java, JavaScript, MATLAB
Tools Linux, Git, GitLab, SVN, Valgrind, GDB, \LaTeX

Awards

- 2021 **Robert P. Balles Outstanding Senior Math Award**, *Cal Poly Mathematics Department*.
Selected on the basis of participation in clubs and societies, contribution to the image of the department, and scholastic achievement.
- 2020 **Accenture Outstanding Junior Math Award**, *Cal Poly Mathematics Department*.
Awarded to a single junior in the math major for demonstrating superior leadership skills and the ability to work effectively with peers and faculty.
- 2019, 2020 **Edward Van Dwyne Memorial Scholarship**, *Cal Poly Mathematics Department*.
Two time recipient of scholarship intended for high-achieving students in the mathematics major.